CLAIMS

1. Device for transdermal administration of active substances, having a back layer and an active substance-containing reservoir connected thereto, characterized in that the skin-facing contact surface of the device has a plurality of microprotrusions which are suitable for penetrating into the skin and which are provided with structures that make extraction of the protrusions from the skin more difficult.

2. Device according to claim 1, characterised in that for insertion of the microprotrusions into the skin a smaller force is required than for the subsequent extraction from the skin.

3. Device according to claim 1 or 2, characterised in that the microprotrusions are needle-shaped.

4. Device according to any one of claims 1 to 3, characterised in that it comprises a plurality of microprotrusions, the longitudinal contour of which has one or more undercuts, thereby forming the said structures.

5. Device according to any one of claims 1 to 3, characterised in that it has a plurality of microprotrusions wherein said structures are configured as barbs, each of said microprotrusions having one or more of such barbs.

6. Device according to any one of claims 1 to 3, characterised in that it has a plurality of microprotrusions which are helically configured and rotatably arranged and which thereby, upon application of a rotating movement, fa-

cilitate penetration into the skin and effect anchorage in the skin.

7. Device according to claim 6 characterised in that the rotary drive is effected by micromechanical actuators.

8. Device according to any one of the preceding claims, characterized in that the microprotrusions, or at least several of the microprotrusions, are fixed in the active substance-containing reservoir.

9. Device according to any one of the preceding claims, characterised in that the microprotrusions, or at least several of the microprotrusions, are connected with the back layer.

10. Device according to any one of the preceding claims, characterized in that the microprotrusions, or at least several of the microprotrusions, are configured as hollow needles.

11. Device according to any one of the preceding claims, characterised in that on the skin side it has an adhesive polymer matrix which is preferably arranged such that it is coextensive with the plane of the microprotrusions.

12. Device according to claim 11, characterised in that the microprotrusions protrude from the plane of the polymer matrix layer by, on average, less than 300 µm.

13. Device according to claim 11 or 12, characterised in that the adhesive polymer matrix at the same time constitutes the active substance reservoir and contains one or more active substances, optionally in combination with one or more auxiliary agents.

14. Device according to any one of the preceding claims, characterised in that it contains one or more active substances which is/are selected from the groups of the peptides, proteins, oligonucleotides and polynucleotides.

15. Device according to any one of the preceding claims, characterised in that it contains one or more vaccines preferably selected from the group comprising bacteria, viruses, bacterial toxoids, oligonucleotides and polynucleotides as well as genetically engineered antigens.

16. Use of a device according to any one of the preceding claims for transdermal administration of active substances or vaccines to a human or animal body.

17. Use according to claim 16, characterised in that the active substances or vaccines are selected from the group comprising peptides, proteins, oligonucleotides, polynucleotides, bacteria, viruses, inactivated viruses, bacterial toxoids, oligonucleotides and polynucleotides as well as genetically engineered antigens.